

Title: Using systems thinking to advance global health engagement in education and practice

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Abstract

The integration of global health into nursing practice within complex systems requires a strategic approach. The System-Level Awareness Model (SAM) can be used to guide the process of enhancing systems thinking for global health. The purpose of this article is to explain the SAM model and how to use it for integrating systems thinking into nursing education in academic, professional development and continuing education settings to promote global health across the nursing continuum. Tips are provided about how to teach systems thinking for global health in nursing education and practice, consistent with continuing education national learning competencies for health care professionals.

The Need for Systems Thinking to advance Global Health

Worldwide, there is a critical need for systems thinking (ST) to advance a culture of health (Alliance for Health Policy and Systems Research, 2016). For several decades, the World Health Organization (2010) has promoted a global health agenda. However, leading causes of death across the globe can be described as preventable (i.e., heart/lung diseases, infections) and/or human-induced (i.e., medical errors, road injuries), marginalizing vulnerable people through poor allocation of funds, and/or goods and services such as education and health care (United Nations, 2015). The integration of ST for global health requires discerning how to effectively strengthen systems to prevent disease, and to improve health and achieve equitable access for care among people of all cultures and countries.

The premise for ST to advance global health is that humans are all interconnected regardless of geo-political boundaries. This assumes that human health outcomes are a result of interconnectivity, inferring that human actions impact health across system components. Human actions can improve, sustain or even diminish health across the global health system.

Focus on a culture of health for nurse educators

In order for nursing to deliver on its universal mission to provide a culture of health, nurse educators must recognize ways of integrating ST education for global health. Incorporating ST into nursing education programs in academic, professional development, and continuing education programs provides an opportunity for nurses to increase awareness of how their actions impact health outcomes, shifting health ideology from individual responsibilities toward a consequence of a collective effort. That is, an international culture of health is dependent on nurse educators and their learners to be competent systems thinkers, recognizing that the whole global health system is greater than the sum of its components.

The System Awareness Model (SAM), which includes the progressions of seven phases for teaching ST (Phillips, Stalter, Dolansky & Lopez, 2016; Phillips & Stalter, 2016), is a guiding framework that nurse educators can use for beginner, intermediate and advanced systems thinkers. Phases 1-3 designate beginning level nurses who need to seek approval in order to take action and understand consequences of behavior within the health care system. Phases 4 and 5 exemplify intermediate level nurses who have confidence in understanding how quality and safety impacts organizations as a whole. Phases 6 and 7 are represented by nurses who function independently and take leadership roles for quality and safety in health care systems.

Tips on how to begin to teach ST for global health

ST in nursing education and practice can allow nurses to address the complexity of health systems while improving patient care and outcomes for global health. Table 1 exhibits teaching tips on how to begin to teach global health using ST, including curricular content and activities. The tips are aligned with the *Alliance for Continuing Education in the Health Professionals*

(CEhp) *National Learning Competencies* (NLCs) (2013) and support goals for professional nursing organizations in academic and service settings (see previous column in this series).

Table 1. Tips for the Using SAM for Global Health

SAM Phase	Global Health Content	Learning Activities	Continuing Education in the Health Professionals (Cehp) National Learning Competency (NLC) and other related competencies for academic and professional development programs
Phase one: Basic nursing care	Local and global health issues	Invite a guest lecturer with expertise on both local and global trends with international experience, or a patient from a culture commonly served by the health care agency. Learners identify and discuss global issues and potential partnerships for global health both at home and abroad.	NLC 4.2: Collaborate with external stakeholder groups and key partners that can help maximize the impact of CEhp activities/interventions.
Phase two: System-based awareness	Different national historical, political, and cultural perspectives	Virtual field trip to offices of organizations engaged in global health. Learners work in small groups to identify personal knowledge deficits about global health. Report on various cultural perspectives of health issues within and across health care delivery systems.	NLC 7: Engage in self-assessment and life-long learning by continually assessing individual and CEhp program performance. NLC 8: Engage in systems thinking in CEhp by recognizing that a team of healthcare professionals are a part of a complex system.
Phase three: Clinical reasoning	Challenges for developing countries	Local events or web-based video events about global health challenges. Learners write a reflective paper on clinical reasoning for the global health challenges presented at the events.	NLC 2: Design educational interventions that produce expected results for learners and the organization.
Phase four: System-level synthesis	Intercultural issues in professional practice	Role play. Learners prepare scripts for role play and debate for intercultural issues related to global challenges for interprofessional practice, as appropriate for understanding the health needs of the global population served by the clinical agency	NLC 2.1: Implement CEhp activities/ interventions to close healthcare professionals' practice gaps and address underlying learning needs through team-based learning and interprofessional education.
Phase five:	International	Media reports. Learners use interactive	NLC 1: Use evidence-based

System-level analysis	& national laws, standards professional practice	visual learning adult learning principles to analyze various global laws and standards of practice reported in the media, linking global trends to local practice.	adult learning principles to improve the performance of healthcare professionals, the healthcare team and the organizations in which they work, to improve patient outcomes.
Phase six: Application of system-level awareness	International & national customs to professional practice	Presentations. Learners conduct presentations about individual countries' customs related to global health, applying professional standards of practice to determine effectiveness.	NLC 3.1: Use data to assess and determine the effectiveness of CEhp activities/interventions and the impact of the overall CEhp program.
Phase seven: Leadership in complex health care system	Leadership in ST for global health systems	Data Analysis. Learners collect data about disease-specific challenges within nations, then propose leadership interventions to address care within the health system.	NLC 3.2: Use data to evaluate the effectiveness of CEhp activities/interventions and the impact of the overall CEhp program.

Conclusion

The use of the SAM for global health provides a strategic approach for nurse educators to infuse ST for global awareness and engagement in nursing and/or interprofessional education programs and practice (Phillips et al, 2016; Phillips & Stalter, 2016). The model can be used in combination with the CEhp learning competencies (2013), global health content, and community-based activities to engage learners, setting the stage for critically needed leadership in health systems worldwide. The next column in this series will offer strategies and tips for integrating global awareness and engagement into clinical practice.

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